

## What is claimed is:

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1. A method of controlling the display of an articulated graphical image in a graphical environment, the method comprising:

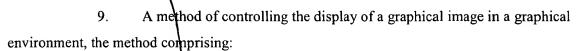
sensing manipulation of a user object;

controlling the displayed position or shape of the articulated graphical image in relation to the sensed manipulation; and

when the atticulated graphical image interacts with a graphical object, changing the relationship between the displayed position or shape of the articulated graphical image and the sensed manipulation.

- 2. A method according to claim 1 wherein when the articulated graphical image interacts with a graphical object, the displayed position or shape of the articulated graphical image is calculated by an algorithm.
- 3. A method according to claim 2 wherein the algorithm uses constraints to calculate the displayed position or shape of the graphical image.
- 4. A method according to claim 2 wherein the algorithm uses numerical methods to calculate the displayed position or shape of the graphical image.
- 5. A method according to claim 2 wherein the algorithm comprises a quadratically converging and linearly scalable constraint solver.
  - 6. A method according to claim \( \) wherein the user object is articulatable.
- 7. A method according to claim 1 wherein the user object is capable of providing a haptic sensation to the user.
- 8. A method according to claim 7 wherein the haptic sensation is related to the interaction of the graphical image and the graphical object.





sensing manipulation of a user object;

controlling the displayed position or shape of the graphical image in relation to the sensed manipulation; and

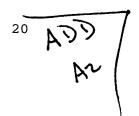
when the articulated graphical image interacts with a graphical object, changing the relationship between the displayed position or shape of the graphical image and the sensed manipulation by calculating a position or shape of the graphical image using an algorithm using numerical methods.

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- 10. A method according to claim 9 wherein the algorithm comprises a quadratically converging and linearly scalable constraint solver.
- 11. A method according to claim 9 wherein the user object is capable of providing a haptic sensation to the user.
- 12. A method according to claim 11 wherein the haptic sensation is related to the interaction of the graphical image and the graphical object.



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